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March 14, 2012

Kelsey Helton
Florida Department of Environmental Protection
Bureau of Waste Cleanup
Division of Waste Management MS 4500
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Scott Martin
USEPA Region 4
61 Forsyth Street, S.W.
Mail Code 9T25
Atlanta, GA 30303-8960

Re: Pre-Design Work Plan
Reeves Southeastern Superfund Site Tampa, Florida

Dear Ms. Helton and Mr. Martin:

Industrial Galvanizers, Inc. (IG) performed a review of the document titled: *Pre-Design Work Plan, Reeves Southeastern Superfund Site, Tampa, Florida, November 2011* (Work Plan) that was prepared for the Reeves Southeastern Site Trust (Reeves) by ARCADIS U.S., Inc. The Work Plan was prepared to address United States Environmental Protection Agency (EPA) and Florida Department of Environmental Protection (FDEP) concerns about the proposed approach for groundwater remediation at the Site. Groundwater remediation is required at the Reeves Southeastern Superfund Site (Site) under a Record of Decision for Operable Unit Two (OU2) that was signed by EPA and Reeves in 1993, along with a Consent Decree, which was signed in 1994. Focused Feasibility Studies (FFS) were performed by Reeves in 2010 and 2011 and included evaluations of in-situ chemical precipitation as the preferred groundwater remedial method.

This letter presents IG's comments about the Work Plan. In addition, a summary of historical industrial operations and related contamination at the Site is presented to provide a background for some of IG's comments.

Historical Industrial Operations and Related Contamination

IG currently leases a portion of the Site and operates a galvanizing facility (located at the southwest portion of the property) that was constructed in 2000 (Exhibit A). IG began leasing the facility in 1996 and currently conducts a hydrochloric acid-based zinc galvanizing process at the Site. All process tanks are located above ground and have secondary containment. The facility currently operates within the allowed limits of its operating permits, including air and stormwater permits. In addition, the facility has implemented innovative best management practices at the Site including: collection and reuse of stormwater from the galvanizing facility roof, installation of bag house, paving of the majority of leased portions of the Site, installation of a concrete liner and limestone gravel baffles in the stormwater ditch, and daily sweeping and proper disposal of dust.

Valmont Industries, Inc.
7002 North 288th Street P.O. Box 358 Valley, Nebraska 68064-0358 USA
402-359-2201 www.valmont.com

The Site has been utilized for metal galvanizing and industrial operations since approximately the 1960s. Former operations during the 1960s through the mid-1990s included an old galvanizing facility (which was located at the approximate center of the property and demolished, although the former building pad remains in place), a wastewater treatment system (which included two evaporation ponds located at the northern portion of the property that were closed as part of OU1), and appurtenant structures. Based on a review of historical aerial photographs of the Site, there was a significant difference between operations conducted prior to 1996 and current operations (Exhibit B). An aerial photograph from 1995 clearly shows wastewater runoff occurring from the old galvanizing building towards the northwest in the direction of the wetlands. The Site was largely unpaved in 1995 and house-keeping practices appeared to be very poor. The galvanizing process utilized at the time was sulfuric acid-based and some of the process tanks were located below ground. As reported in the RODs for the Site and related reports, the historical operations at the Site caused contamination of soils, sediments, surface water, and groundwater with zinc and other metals, along with low pH fluids (largely sulfuric acid). Contaminant concentrations in groundwater have historically been detected at higher levels in the vicinity of the old galvanizing facility and the closed ponds. An operational change between Reeves' and IG's tenure at the Site provides an indication of the approximate time frame for when groundwater contamination occurred at the Site. Reeves used sulfuric acid and some zinc ammonium chloride as part of their operation. IG uses hydrochloric acid. Accordingly, a release during Reeves' tenure would be evident due to an extensive amount sulfate and zinc in the groundwater, with some chloride. A release during IG's operation would result in a significant amount of chloride and zinc occurring in groundwater. Based on recent groundwater sample data collected by Reeves, an extensive plume of sulfate and zinc is present in groundwater. Chloride was only minimally detected in groundwater across the Site. Sulfate and zinc levels were observed to be most highly concentrated in groundwater in the vicinity of the old, pre-1996 galvanizing facility and the closed evaporation ponds. This clearly indicates that these plumes in groundwater are a result of operations prior to 1996.

Numerous clustered wells have been installed by Reeves and others in order to evaluate groundwater conditions in both the Sand and the Transition Zones . However, a thorough evaluation of vertical gradients within these zones has not been performed. Based on available data, downward gradients apparently exist in the areas near the old galvanizing facility and the closed pond areas. Groundwater gradients appear to become upward in the vicinity of the wetland areas (which commonly occurs in wetland areas). Based on the upward gradient, the shallow depth to groundwater, and the sandy nature of the soils, it is clear that groundwater is discharging to surface water in the wetland areas. The seasonality of this relationship has not been evaluated.

As part of OU-1, contaminated unsaturated zone soils were identified and removed from the Site. OU-1 excavation areas are shown on Exhibit C. In addition to the wastewater evaporation ponds, the main area of excavation was the surface water drainage area located to the northwest of the former galvanizing facility. Given that the old galvanizing facility had not been demolished at the time of the soil excavation portion of OU-1, potentially contaminated soils beneath the facility were neither assessed nor remediated (including the areas beneath the underground process tanks). Low pH process fluids, which contained high concentrations of metals, were likely released during historical operations at the old galvanizing facility during its operation for over 30 years. These fluids, which were denser than water, would have been expected to soak into the sandy soils at the Site and then migrate vertically into the saturated

zone beneath the facility. This would have resulted in a low pH contaminant mass within the saturated zone soils that were not excavated during OU-1, which could be an ongoing source of dissolved groundwater constituents over time both in the vicinity of the old galvanizing facility and the closed ponds. To date, we are unaware of any effort that has been made to characterize and/or remediate contaminated saturated zone soils in either of these source areas, which are likely contributing significantly to the persistence of high-concentration sulfate and zinc in the groundwater contaminant plumes at the Site. Until these sources are properly characterized and remediated, we are concerned that the groundwater remedy at the Site will continue to prove ineffective over time.

General Comments

1. ***Possible Presence of Contaminant Mass in Source Areas***
   As described above, low pH contaminant mass is likely present within saturated zone soils beneath the former pond area and the old galvanizing facility. The contaminant mass is likely an ongoing source of the low pH and dissolved metals in groundwater that have been detected downgradient of these areas. Accordingly, IG recommends that a thorough characterization of saturated zone soils in these areas be performed in order to assess the concentration and extent of residual impacts within the source areas at the Site. Specifically, the investigation should include the following:
   - Soil borings within the potential source areas to confirm mass concentrations and extent within the saturated zones.
   - Collection and analytical testing of soil samples within the saturated zone in potential source areas.
   - Characterization of hydrogeology and geochemistry within source areas.

2. ***Lack of Site Characterization to Identify Hydrogeologic Conditions***
   Investigative efforts to date have been insufficient to properly characterize the hydrogeologic conditions within the underlying saturated zones. An expanded investigation should be added to the work scope in order to provide the data necessary to better understand vertical gradients, contaminant migration pathways, and groundwater-surface water interactions at the Site and thereby assist with designing and implementing an appropriate, cost-effective groundwater remedy. Specifically, the investigation should include:
   - Installation of additional clustered wells (completed at different depths within the saturated zones) to evaluate vertical groundwater gradients and contaminant concentration profiles across the Site.
   - Extensive surface water and groundwater monitoring, sampling and analysis during different seasons to evaluate the interactions between surface water and groundwater.
   - Expanded geophysical evaluations across the entire Site to evaluate the bedrock surface profile.

3. ***Conduct Pilot Studies in Former Source Areas***
   The effectiveness of groundwater remediation using calcium polysulfide is highly dependent on pH. An attempt was made during the FFS to inject bicarbonate into the aquifer to increase the pH. The pH initially increased in all wells, but gradually returned to near original conditions after approximately 30 days. This indicates that the source of low pH water was located upgradient of the injection zone and was not treated by the

injections. Why were the potential source areas not targeted for injection? Pilot testing in source areas is an integral part of any FFS.

Specific Comments

1. Page 1, 3rd Paragraph, 4th Sentence. Explain what "swale lining and armoring" will entail.
2. Page 2, 3rd Paragraph, 5th Sentence. Numerous assertions have been made in this and other documents prepared for Reeves that surface water runoff from upgradient industrial operations (including IG) represents the most significant ongoing source of zinc to the environment. According to data from numerous investigations of the Site, there were substantial historical contributions to Site impacts that occurred prior to IG's presence. IG is in compliance with all environmental permits for the Site. Any minimal contribution from stormwater that may have occurred would have been minuscule compared to the historical impacts. Accordingly, Reeves should remove this, and all similar statements from all documents related to the Site.
3. Page 3, 2nd Paragraph, 1st Bullet. Conducting a geophysical survey is a good method for better understanding the subsurface lithologies at the Site. However, it is unclear why only the northern portion of the Site will be evaluated. The survey area should be extended further south, to include the area in which the old galvanizing facility was located.
4. Page 3, 2nd Paragraph, 2nd Bullet. The statement was made that "a hydraulic gradient promoting groundwater discharging to surface water" was implied by groundwater level data. We agree with this conclusion (in the vicinity of the wetlands), and recommend that a more extensive evaluation be performed.
5. Page 4, 2nd Bullet. As noted above, we recommend that hydrogeological and geochemical data be collected across the entire Site in order to: evaluate vertical gradients within the saturated zone, contaminant mass within the saturated zone soils, contaminant migrations routes, and groundwater-surface water interactions. The scope of work presented in the Work Plan is only a small fraction of the total evaluation that typically is performed when designing a remedial system for a contaminated site. Design and implementation of remedial strategy without a complete understanding of a site's characteristics is the primary reason that many remediation systems fail to perform adequately.
6. Appendix A, Page 4. IG agrees that the Site has not been adequately characterized. In addition, as discussed in Comment #1, we recommend that Reeves remove all unsubstantiated claims about IG from the report text. To continue to blame IG in this way is misleading and diverts attention from the need to better characterize the Site.

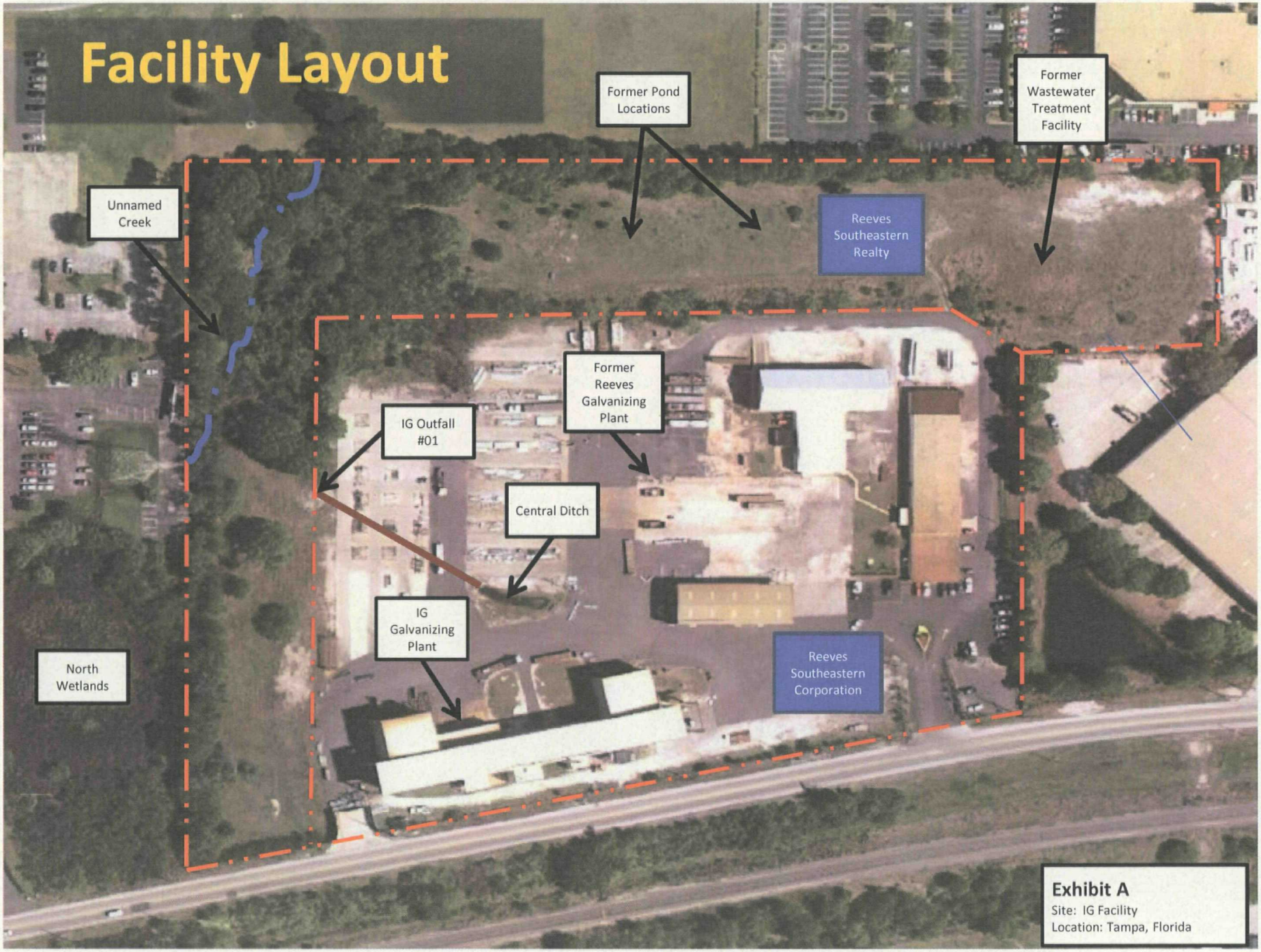
IG formally requests that EPA and FDEP provide a response to these questions about the Work Plan. IG strongly encourages EPA and FDEP to request that Reeves collect the necessary characterization data and related information to adequately design a pilot test program for the Site. To implement anything less would undoubtedly lead to failure of the proposed groundwater remedy.

If you have any questions about this letter, we would be happy to visit with you in person to more fully explain our understanding of the Site.

Best Regards,

William R. Taylor
Director of Environmental, Health and Safety
Valmont Industries, Inc.
PO Box 358
Valley, NE 68064
(402) 359-2201 Ext. 3110

Cc: Janine M. Landow-Esser
Don Bradshaw

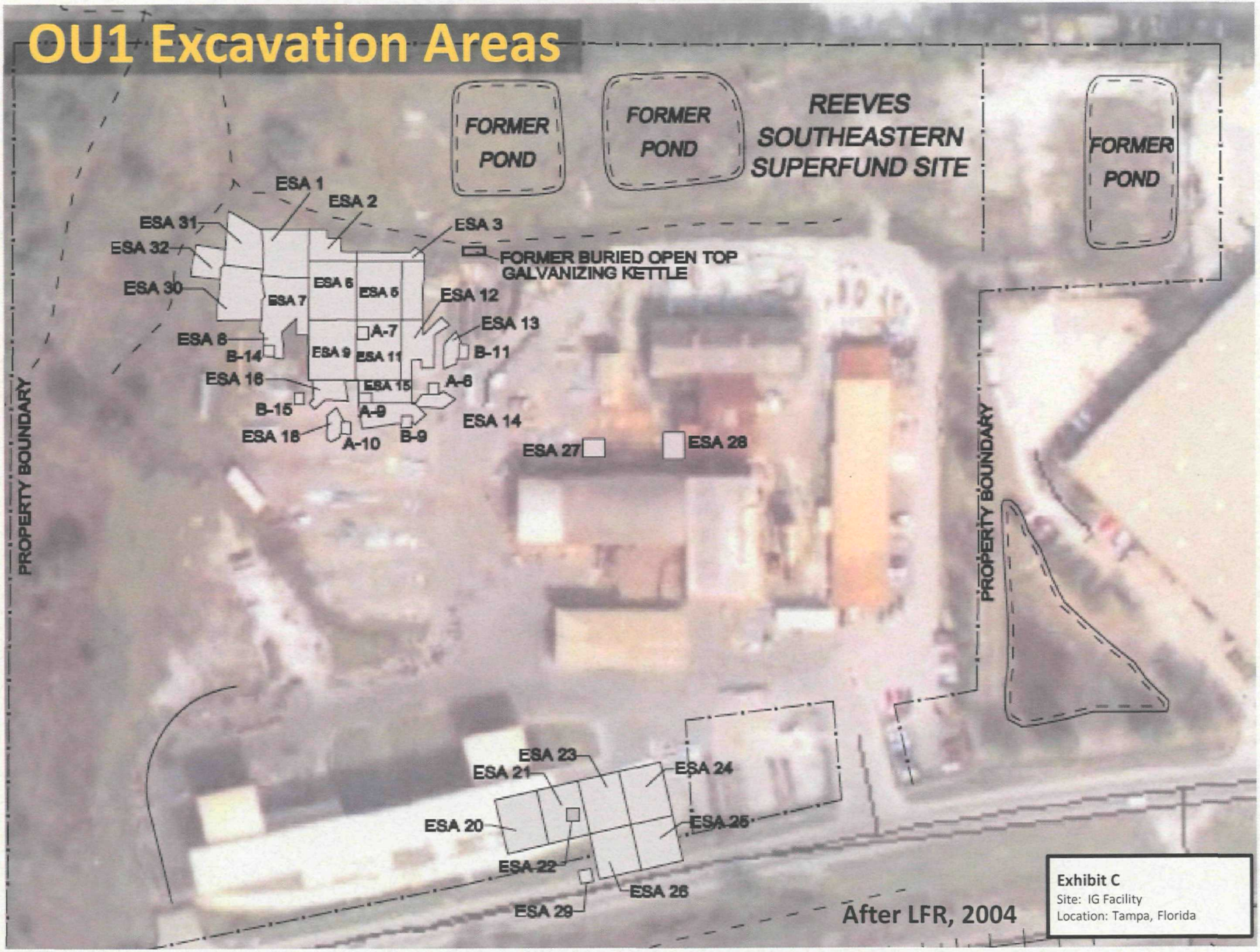

Facility Layout
Former Pond Locations
Former Wastewater Treatment Facility
Unnamed Creek
Reeves Southeastern Realty
Former Reeves Galvanizing Plant
IG Outfall #01
Central Ditch
IG Galvanizing Plant
North Wetlands
Reeves Southeastern Corporation
Exhibit A
Site: IG Facility
Location: Tampa, Florida

Facility Aerial Views

1995

2010

Exhibit B
Site: IG Facility
Location: Tampa, Florida


OU1 Excavation Areas
FORMER POND
FORMER POND
REEVES SOUTHEASTERN SUPERFUND SITE
FORMER POND
ESA 1
ESA 2
ESA 3
ESA 31
ESA 32
ESA 30
ESA 7
ESA 6
ESA 5
ESA 12
ESA 13
ESA 8
B-14
ESA 9
ESA 11
A-7
B-11
ESA 16
ESA 15
A-6
B-15
A-9
ESA 14
ESA 18
A-10
B-9
FORMER BURIED OPEN TOP GALVANIZING KETTLE
ESA 27
ESA 28
PROPERTY BOUNDARY
PROPERTY BOUNDARY
ESA 23
ESA 21
ESA 24
ESA 20
ESA 25
ESA 22
ESA 26
ESA 29
After LFR, 2004
Exhibit C
Site: IG Facility
Location: Tampa, Florida